

SEQUENCE LISTING

5 <110> Center for Genetic Engineering and Biotechnology.
 <120> VECTOR FOR PRODUCTION OF ANGIOSPERM TRANSPLASTOMIC PLANTS.
 <130> Vector for plastid transformation
 10 <140> 0000
 <141> 2002-08-05
 <160> 26
 15 <170> PatentIn Ver. 2.1
 <210> 1
 <211> 21
 <212> DNA
 20 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: Oligonucleotide
 25 corresponding to the region -291 to -270 (from the
 start of translation) of the tobacco rbcL gene.
 <400> 1
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 30 <210> 2
 <211> 20
 <212> DNA
 <213> Artificial Sequence
 35 <220>
 <223> Description of Artificial Sequence: Oligonucleotide
 corresponding to the region +1213 to +1233 (from the
 start of translation) of the tobacco rbcL gene.
 40 <400> 2
 ccaaggatgt cctaaagttc 20
 45 <210> 3
 <211> 133
 <212> DNA
 <213> Artificial Sequence
 50 <220>
 <223> Description of Artificial Sequence: Synthetic DNA
 fragment corresponding to the region -162 to -29
 of the non-translating lider of the tobacco rbcL
 55 gene, with modifications to introduce an "ideal"
 lacO.
 <400> 3
 ccatggtcta ataatacaaac attctgatta gttgataatt caaattgtga gcgctcacia 60
 tttgaaagat tcctgtgaaa agtttcatta acacggaatt cgtgtcgagt agaccttggt 120
 60 gttgtgagaa ttc 133

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5    <210> 4
    <211> 1523
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Description of Artificial Sequence: Nucleotide sequence
10      of the rbcL-border.

    <400> 4
    gggaagttct tattatattag gttagtcagg tatttccatt tcaaaaaaaaa aaaaagtaaa 60
    aaagaaaaat tgggttgcgc tatatatatg aaagagtata caataatgat gtattttggca 120
15  aatcaaatac catggtctaa taatcaaaca ttctgattag ttgataattc aaattgtgag 180
    cgctcacaaat ttgaaagatt cctgtgaaaa gtttcattaa cacggaattc gtgtcgagta 240
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20  ctcaacctgg agttccacct gaagaagcag gggccgcggg agctgccgaa tcttctactg 480
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    tatttggtt caaagccctg cgcgctctac gtctggaaga tctgcgaatc cctcctgctt 720
25  atgttaaaac tttccaaggt ccgcctcatg ggatccaagt tgaaagagat aaattgaaca 780
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    gaggaacttt aggacatcct tgg                                     1523

40  <210> 5
    <211> 24
    <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Description of Artificial Sequence: Oligonucleotide
45      corresponding to the region -543 to -519 (from the
        start of translation) of the rice atpB gene.

50  <400> 5
    gacttgagtt gttggtattg taag                                     24

55  <210> 6
    <211> 23
    <212> DNA
    <213> Artificial Sequence

60  <220>
    <223> Description of Artificial Sequence: Oligonucleotide

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corresponding to the region +1188 to +1211 (from the start of translation) of the rice atpB gene.

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5  <400> 6
   atgtcctgaa gttctttgta acg
                                     23

   <210> 7
   <211> 132
10  <212> DNA
   <213> Artificial Sequence

   <220>
   <223> Description of Artificial Sequence: Synthetic DNA
15   fragment corresponding to the region -654 to -543
      of the non-translating lider of the rice atpB gene,
      with added restriction sites.

   <400> 7
20  aagcttggcc aaaaaggccg tcgacaaaat gggggggcatg cttaagttaa tgaatatgtt 60
   tcattcatat aatatgtttc attcatatat aatgggtaca ccctgtgtac attctatgct 120
   ataggaattc at
                                     132

25  <210> 8
   <211> 1887
   <212> DNA
   <213> Artificial Sequence

30  <220>
   <223> Description of Artificial Sequence: Nucleotide sequence
      of the atpB-border.

   <400> 8
35  aagcttggcc aaaaaggccg tcgacaaaat gggggggcatg cttaagttaa tgaatatgtt 60
   tcattcatat aatatgtttc attcatatat aatgggtaca ccctgtgtac attctatgct 120
   ataggaattc attcgacttg agttgttggt attgttaagt aacatgcttc gattattaaa 180
   ccatggattt gattcaccaa atccatcttt attgtatact ctttaataga tatagcgcaa 240
   ccccaaatac acttctaata cttattaagt tcttaataga cccctttttc ttattttgag 300
40  tggaaataacc taaatactac gaaaattctc tgttgacagc aatctatgct tcacagtagt 360
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   aaggcaaaat gtatatgaaa aaaagattga ttgaactttc cgacggactc attccatgag 480
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   tccccggggc aagttacctt atatttataa tgctttggta gtcaagagtc gagacactga 840
   cggttaagcaa attaatgtaa cttgtgaggt acaacaatta ttaggaaata atcgagttag 900
50  agctgtagct atgagtgcta cagatgggtt gatgagagga atggaagtga ttgacacggg 960
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   cgcgcccgcc tttatcgagt tagatacgaa attatccatc tttgaaactg gtattaaggt 1140
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55  agtaggtaaa acagtactca tcatggaatt aatcaacaat attgctaaag ctcacggggg 1260
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   tatggcagaa tatttccgag atgttaataa gcaagacgtg cttctattca tcgataatat 1500
60  ctttcgtttt gttcaagcag gatcggaggt atctgcctta ttagggagaa tgccctctgc 1560
   agtgggttat caacctactc ttagtacaga aatgggttct ttgcaagaaa gaattacttc 1620

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tactaaaaag ggatctataa cttcgatcca agcgggtttat gtacctgcgg acgatttgac 1680
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attagcttcc aaagggattt atcctgcagt agatccttta gattcaacct caactatggt 1800
acaacctcgg atcgttggca acgaacatta tgaaactgca caaagagtta agcaaacttt 1860
5 acaacgttac aaagaacttc aggacat 1887

<210> 9
<211> 24
10 <212> DNA
    <213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Oligonucleotide primer
15      used to amplify the hgh gene by PCR, with a RBS.

<400> 9
    gggaggaatg agatatgaaa aagc 24

20
    <210> 10
    <211> 24
    <212> DNA
    <213> Artificial Sequence
25
    <220>
    <223> Description of Artificial Sequence: Oligonucleotide primer
        used to amplify the hgh gene by PCR, with added KpnI site.

30 <400> 10
    gtcggtacct actctatttc tttg 24

    <210> 11
35 <211> 41
    <212> DNA
    <213> Artificial Sequence

    <220>
40 <223> Description of Artificial Sequence: Synthetic DNA
        fragment with useful restriction sites for the construction
        of the selection cassette with the hgh gene.

    <400> 11
45 aagcttgatt cgagtgaacg cgtatagggc ccgggagatc t 41

    <210> 12
    <211> 2223
50 <212> DNA
    <213> Artificial Sequence

    <220>
    <223> Description of Artificial Sequence: Nucleotide sequence of
55      the DNA fragment containing the selection cassette with
        repeated borders that was cloned in the pBluescript.

    <400> 12
60 aagcttgatt cgagtgaacg cgtatagggc ccaattcgag ctcggtacca gcaccaccag 60
    cggtgaggtg cggaacttct acaacctcaa agcccataac gttgcggata gaaccttct 120
    caggggtcaat cagagcagcg tagtttgctg cgttcggcat cagtgctgcc agaatcgag 180

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    agtagctatc tgggtcacag tagaacacac ggtcagcagc cggaacatag ttcttgggtca 240
    gagccgcacg agccttagtc agagccgcaa taatctcctt acccagcgca acttgggtcgg 300
    tcaagtgcgg ccttgttctg agtgggtctca attacggtag cagtacctaa gccctcgggg 360
    gatctgggga ggaatgagat atgaaaaagc ctgaattcac cgcgacgtct gtcgagaagt 420
5    ttctgatcga aaagttcgac agcgtctccg acctgatgca gctctcggag ggcaagaat 480
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    gtgcacaggg tgtcacgttg caagacctgc ctgaaaccga actgcccgtt gttctacaac 720
10   cggtcgcgga ggctatggat gcgatcgctg cggccgatct tagccagacg agcgggttcg 780
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    tcgcgacagg tctcgatgag ctgatgcttt gggccgagga ctgcccga caatggccgc 960
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15   tcattgactg gagcgaggcg atgttcgggg attcccaata cgaggtcgcc aacatcttct 1080
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25   cttagtcaga gccgcaataa tctccttacc cagcgcaact tggtcggtaa gtgcggcctt 1680
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30   agggaactgc caggcatcaa ataaaacgaa aggtcagtc gaaagactgg gccttctggt 1980
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    ggcatcaaat taagcagaag gccatcctga cggtaggcct ttttgcgttt ctacaaactc 2160
    tttttgttta tttttctaaa tacattcaaa tatgtatccg ctgggggatc cactagtctt 2220
35   aga 2223

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<210> 13

<211> 5669

40 <212> DNA

<213> Artificial Sequence

<220>

45 <223> Description of Artificial Sequence: Nucleotide sequence of DNA
fragment from the vector pVTPA-f between the rice atpB and
tobacco rbcL borders.

<400> 13

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    tccaaatgtg caaatgttgt agcaggagca gggtcgggtc aatcgccgc aggtacataa 240
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55   gcagatacct ccgatcctgc ttgaacaaaa cgaaagatat tatcgatgaa tagaagcacg 420
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60   ttgattaatt ccatgatgag tactgtttta cctactccag ctcccccaaa tagtccgatt 720
    tttcctccac gccgataagg agctaaaaga tcgaccacct taataaccagt ttcaaagatg 780

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```

```

25 <210> 14
    <211> 176
    <212> DNA
    <213> Artificial Sequence

```

```

30 <220>
    <223> Description of Artificial Sequence: Synthetic DNA
          fragment codifying for the promoter region of the plastid 16S
          ribosomal RNA (Prn), with added restriction sites.

```

```

35 <400> 14
    gaattcccc gggctgctcc cccgccgtcg ttcaatgaga atggataaga ggctcgtggg 60
    attgacgtga gggggcaggg atggctatat ttctgggagc gaactccggg cgaatacga 120
    gcgcttgat acagttgtag ggagggattt catcgtttaa actcgagtga acgcgt 176

```

```

40 <210> 15
    <211> 5834
    <212> DNA
    <213> Artificial Sequence

```

```

45 <220>
    <223> Description of Artificial Sequence: Nucleotide sequence of DNA
          fragment from the vector pVTPA between the rice atpB and
          tobacco rbcL borders.

```

```

50 <400> 15
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    gtttcataat gttcgttgcc aacgatccga ggttgtaaca tagttgaggt tgaatctaaa 120
    ggatctactg caggataaat ccctttggaa gctaatcctc tggaaagtac ggtagtagca 180
    tccaaatgtg caaatgttgt agcaggagca gggtcgggtca aatcgctccg aggtacataa 240
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    cccatttctg tactaagagt aggttgataa cccactgcag agggcattct ccctaataag 360
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```

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25    ctttggggat gattccgtac tacagttcgg tggaggaact ttaggacatc cttggatctg 5820
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```

```

30    <210> 16
      <211> 96
      <212> DNA
      <213> Artificial Sequence

```

```

35    <220>
      <223> Description of Artificial Sequence: Nucleotide sequence of the
            chimeric PpsbA* promoter with added restriction sites and a RBS.

```

```

      <400> 16
40    gaattcacct tggttgacac gagtatataa gtcatgttat actggttgaat aaaaagcctt 60
      ccattttgat taaataaagg aggattttca tatgat                                     96

```

```

45    <210> 17
      <211> 106
      <212> DNA
      <213> Artificial Sequence

```

```

50    <220>
      <223> Description of Artificial Sequence: Synthetic DNA fragment
            codifying for a mini-cistron, a RBS, and restriction sites.

```

```

      <400> 17
55    catatgtatc gattacgtaa ggaggaataa accatggacg agctctagac tgcagcatgc 60
      ccgggatcct aggctgata tcaagcttct cgagctgtcg acagct                                     106

```

```

60    <210> 18
      <211> 365
      <212> DNA
      <213> Artificial Sequence

```

<220>

<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVIEP showing the expression cassette and surrounding restriction sites.

5

<400> 18

```

ggtaccgggc cccccctcga ggtcgacggt atcgataagc ttgatatcga attcaccttg 60
ggtgacacga gtatataagt catgttatac tgttgaataa aaagccttcc attttgatta 120
aataaaggag gattttcata tgtatcgatt acgtaaggag gaataaacca tggacgagct 180
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ctgctgccac cgctgagcaa taactagcat aacccttgg ggctctctaa cgggtcttga 300
ggggtttttt gctgaaagga ggaactatat ccggtacctg atatcaagct tctcgagctg 360
tcgac

```

15

<210> 19

<211> 7510

<212> DNA

<213> Artificial Sequence

20

<220>

<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVTPA-f-GUS between the rice atpB and tobacco rbcL borders.

25

<400> 19

```

gtcgagggtca tgtcctgaag ttctttgtaa cgttgttaaag tttgcttaac tctttgtgca 60
gtttcataat gttcgttgcc aacgatccga gggtgttaaca tagttgaggt tgaatctaaa 120
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```

60

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40  <220>
   <223> Description of Artificial Sequence: Oligonucleotide primer
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45  <210> 21
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50  <220>
   <223> Description of Artificial Sequence: Oligonucleotide primer
       used to amplify the aadA gene by PCR.

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVTPA-aadA between the rice atpB and tobacco rbcL borders.

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 and tobacco rbcL borders.

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<211> 6465

<212> DNA

50 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVTPA-Bar between the rice atpB and tobacco rbcL borders.

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<213> Artificial Sequence

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50

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<220>
<223> Description of Artificial Sequence: Nucleotide sequence of DNA
        fragment from the vector pVTPA-Estrep between the rice atpB and
        tobacco rbcL borders.

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